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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,480	01/15/2004	Thomas J. Balkin	WRA 97-09F2CON2	4164

21370 7590 09/25/2009

OFFICE OF THE STAFF JUDGE ADVOCATE
U.S. ARMY MEDICAL RESEARCH AND MATERIEL COMMAND
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504 SCOTT STREET
FORT DETRICK, MD 21702-5012

EXAMINER

NASSER, ROBERT L

ART UNIT

PAPER NUMBER

3735

MAIL DATE

DELIVERY MODE

09/25/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/757,480

Applicant(s)

BALKIN ET AL.

Examiner

ROBERT L. NASSER

Art Unit

3735

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 35-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,35 and 44 is/are allowed.
- 6) ☒ Claim(s) 2,3,37-39,41 and 43 is/are rejected.
- 7) ☒ Claim(s) 40 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date 6/19/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 42-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 is an improper use of means plus function as the term program instruction means refers to code in the specification. A means plus function formulation is construed as the structure disclosed in the specification. For a program instruction, means, the corresponding elements is a computer code, which is not structure. Hence, the scope of the claim cannot be determined.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-3, 39, 41, and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by the Akerstedt et al abstract entitled "The three performance model of alertness.... Akerstedt et al teaches a computer implemented method, system, and program to predict performance of tasks, or cognitive performance, cognitive throughput, which is at least a measure of cognitive performance, where the cognitive throughput is determined from a model of circadian rhythm, C, and a parameter H, which is determined from sleep/wake data and represents a cognitive level. Since the

method is performed on a computer, the structure corresponding to the means for determining is a microprocessor. Claims 39, 41, and 43 are rejected in that Akerstedt divides the data into two epochs, i.e. sleep time and wake time, and calculates alertness/performance for each period.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akerstedt. The examiner notes that the sleep/wake data in Akerstedt could be obtained from any known source of sleep and wake data. The examiner takes official notice that actigraphs and polysomnography are both known sources of sleep/wake data. Hence, it would have been obvious to modify Akerstedt to use these measurement devices, as they are merely the use of known devices for the purposes of Akerstedt.

Claims 1, 35, and 44 are allowable.

Claims 40 and 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1, 40, 42, and 44 define over the art in that none of the art uses the model of circadian rhythm with two sinusoids, one for 24 hours and one for 12 hours, as claimed.

Claim 35 defines over the art in that none of the art determines a cognitive performance from both the sleep/wake function and circadian rhythm, using the claimed formulas.

Applicant's arguments filed 6/8/2009 have been fully considered but they are not persuasive.

Applicant has argued that the structure of Akerstedt is not equivalent to the claimed means for determining because it does not perform the same steps. This argument goes to the function, not the structure, of the means plus function. The structure corresponding to applicant's means for determining is a microprocessor that determines cognitive performance from sleep wake data. The structure disclosed in Akerstedt is a microprocessor that determines cognitive performance from sleep/wake data. As such, the reference meets the claim language. Applicant should change the functional statement to define over Akerstedt.

As to claim 3, as noted above, the claim is not a proper means plus function and therefore, not entitled to the provisions of the sixth paragraph of 35 USC 112.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT L. NASSER whose telephone number is (571)272-4731. The examiner can normally be reached on m-f 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor II can be reached on 571 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert L. Nasser Jr/
Primary Examiner
Art Unit 3735

RLN
September 23, 2009